

## CLAIMS

What is claimed is:

1. A method for storing a structured document in its native format in a database  
5 comprising the steps of:

- a) receiving a structured document;
- b) generating a hierarchical node tree comprising a plurality of nodes, wherein  
the node tree represents the structured document; and
- c) storing the plurality of nodes in at least one record in the database.

10 2. The method of claim 1, wherein generating step (b) further comprises:

- (b1) parsing the structured document into the plurality of nodes; and
- (b2) linking each of the plurality of nodes via pointers to form the hierarchical  
node tree.

15 3. The method of claim 1, wherein each record comprises a plurality of node slots,  
wherein each node slot includes a pointer pointing to a node of the plurality of nodes.

4. The method of claim 3 further comprising:

- (d) storing the at least one record on at least one page.

20 5. The method of claim 4, wherein each page comprises a plurality of record slots,  
wherein each record slot includes a pointer pointing to a record stored on the page.

6. The method of claim 5, wherein each node is identified by an identifier comprising a record slot number corresponding to the record slot pointing to the record in which the node resides and a node slot number corresponding to the node slot pointing to the node.

5           7. The method of claim 5, wherein a node comprises a plurality of child pointers if the node has children, wherein each of the plurality of pointers points to a child node.

8. The method of claim 7, wherein a child pointer points to a node slot pointing to the child node if the child node is a separate node.

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9. The method of claim 8, wherein a node slot in a first record in a first page points to a record slot in a second page and a node slot in a second record if the child node is a separate node stored in the second record on the second page.

15           10. The method of claim 7, wherein the node further comprises an in-lined character array.

11. The method of claim 10, wherein a child pointer describes the child by pointing to the in-lined character array.

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12. The method of claim 7, wherein a child pointer describes the child and its value.

13. The method of claim 1, wherein the structured document is written in Extensible

Markup Language.

14. A computer readable medium containing programming instructions for storing a structured document in its native format in a database the instructions for:

- a) receiving a structured document;
- 5        b) generating a hierarchical node tree comprising a plurality of nodes, wherein the node tree represents the structured document; and
- c) storing the plurality of nodes in at least one record in the database.

15        15. The computer readable medium of claim 14, wherein generating instruction (b) further comprises:

- (b1) parsing the structured document into the plurality of nodes; and
- (b2) linking each of the plurality of nodes via pointers to form the hierarchical node tree.

15        16. The computer readable medium of claim 14, wherein each record comprises a plurality of node slots, wherein each node slot includes a pointer pointing to a node of the plurality of nodes.

17. The computer readable medium of claim 16 further comprising:

- 20        (d) storing the at least one record on at least one page.

18. The computer readable medium of claim 17, wherein each page comprises a plurality of record slots, wherein each record slot includes a pointer pointing to a record stored on the page.

19. The computer readable medium of claim 18, wherein each node is identified by an identifier comprising a record slot number corresponding to the record slot pointing to the record in which the node resides and a node slot number corresponding to the node slot pointing to the node.

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20. The computer readable medium of claim 18, wherein a node comprises a plurality of child pointers if the node has children, wherein each of the plurality of pointers points to a child node.

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21. The computer readable medium of claim 20, wherein a child pointer points to a node slot pointing to the child node if the child node is a separate node.

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22. The computer readable medium of claim 21, wherein a node slot in a first record in a first page points to a record slot in a second page and a node slot in a second record if the child node is a separate node stored in the second record on the second page.

23. The computer readable medium of claim 20, wherein the node further comprises an in-lined character array.

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24. The computer readable medium of claim 23, wherein a child pointer describes the child by pointing to the in-lined character array.

25. The computer readable medium of claim 20, wherein a child pointer describes the

child and its value.

26. The computer readable medium of claim 14, wherein the structured document is written in Extensible Markup Language.

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27. A system for storing a structured document in its native format in a database comprising:

a computer system coupled to at least one data storage device;

a database management system in the computer system; and

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a storage mechanism in the database management system for receiving a structured document, generating a hierarchical node tree comprising a plurality of nodes, wherein the node tree represents the structured document, and storing the plurality of nodes in at least one record in the at least one data storage device.

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28. The system of claim 27, wherein the storage mechanism further comprising a parser for parsing the structured document into a plurality of nodes and a node tree generator for linking each of the plurality of nodes via pointers to form the hierarchical node tree.

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29. The system of claim 27, wherein each record is stored in a page, wherein each record comprises a plurality of node slots, each of which includes a pointer pointing to a node in the node tree.

30. The system of claim 29, wherein each page comprises a plurality of record slots, each

of which includes a pointer pointing to a record stored on the page.

31. The system of claim 30, wherein each node is identified by an identifier comprising a record slot number corresponding to the record slot pointing to the record in which the node resides and a node slot number corresponding to the note slot pointing to the node.

32. The system of claim 29, wherein a node comprises a plurality of child pointers if the node has children, wherein each of the plurality of pointers points to a child node.

33. The system of claim 32, wherein a child pointer points to a node slot pointing to the child node if the child node is a separate node.

34. The system of claim 32, wherein the node further comprises an in-lined character array.

35. The system of claim 34, wherein a child pointer fully describes the child by pointing to the in-lined character array.

36. The system of claim 27, wherein the structured document is written in Extensible Markup Language.